28. The apparatus according to claim **27**, wherein the second electrode is disposed across a cavity defined by a housing in which the apparatus is disposed, and the second plurality of apertures do not penetrate through the housing such that the electret speaker is enabled to emit sound via a monopole pattern.

29. The apparatus according to claim **21**, wherein the loudspeaker is a piezo-electric speaker.

30. The apparatus according to claim **21**, wherein the loudspeaker is selectable between a dipole mode and a monopole mode, wherein the apparatus further comprising a perforated sheet that is movably mounted relative to the display panel such that the dipole mode is selected when perforations defined by the perforated sheet are aligned with the apertures and the monopole mode is selected when the perforations of the perforated sheet are not aligned with the apertures.

31. The apparatus according to claim **21**, wherein the graphical display panel further comprises a touch sensor layer arranged to convert touch inputs at the graphical display panel to electrical inputs, and wherein the plurality of apertures penetrate through the touch sensor layer.

32. The apparatus according to claim **21**, wherein the display layer comprises a plurality of pixels for displaying the images; and

wherein the apertures penetrating at least the display layer are disposed among the plurality of pixels, and wherein each of the pixels comprise an inorganic light emitting diode.

33. The apparatus according to claim **21**, wherein the diaphragm of the loudspeaker defines an area approximately equal to an area defined by the display layer, wherein the loudspeaker comprises an array of diaphragms whose combined area is approximately equal to the area defined by the display layer.

34. The apparatus according to claim **21**, disposed within one of a mobile phone, an automobile dash-mount display, a television, and a personal computer of the type desktop, laptop, palmtop or tablet.

35. An apparatus comprising:

a graphical display panel comprising a display layer configured to display images, wherein the display layer comprises a plurality of apertures penetrating through the display layer, and wherein a radius of each of the plurality of apertures is based, at least in part, on an acoustic resistance; and

a loudspeaker comprising a diaphragm proximate the display layer.

36. The apparatus according to claim **35**, wherein a length of each of the plurality of apertures is based, at least in part, on the acoustic resistance.

37. The apparatus according to claim **35** wherein a size of each of the plurality of apertures is configured to provide optimum acoustic resistance for controlling the vibration modes of a membrane achieve a flat frequency response.

38. A method comprising:

determining a desired acoustic resistance;

using physical parameters of a graphical display panel and the desired acoustic resistance to determine a surface area of the graphical display panel to be occupied by a plurality of holes and to determine a radius of the holes; and

controlling a computer to form the holes, in each of a plurality of graphical display panels that each define the physical parameters, such that the formed holes define the determined radius and occupy the determined surface area of the graphical display panel.

39. The method according to claim **38**, wherein the physical parameters are thickness of the graphical display panel and total display area of the graphical display panel, and wherein the determined radius is constrained to be no greater than a pixel radius of the graphical display panel and forming the holes comprises dispersing the formed holes among pixels of the graphical display panel.

40. The method according to claim **39**, further comprising:

assembling each of the plurality of graphical display panels with the holes formed therein in a sub-assembly with one of an electret speaker or a piezo-electric speaker such that sound emanating from the speaker is directed toward the holes.

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